

# OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **Contoocook Lake, Jaffrey**, the program coordinators have made the following observations and recommendations.

Thank you for your continued hard work sampling the **lake** this year! Your monitoring group sampled the deep spot **three** times this year and has done so for many years! As you know, conducting multiple sampling events each year enables DES to more accurately detect water quality changes. Keep up the good work!

## FIGURE INTERPRETATION

### CHLOROPHYLL-A

- **Figure 1 and Table 1:** Figure 1 in Appendix A shows the historical and current year chlorophyll-a concentration in the water column. Table 1 in Appendix B lists the maximum, minimum, and mean concentration for each sampling year that the lake has been monitored through VLAP.

Chlorophyll-a, a pigment found in plants, is an indicator of the algal abundance. Algae are typically microscopic plants that are naturally occurring in lake ecosystems and contain chlorophyll-a. The chlorophyll-a concentration measured in the water gives biologists an estimation of the algal concentration or lake productivity. **The median summer chlorophyll-a concentration for New Hampshire's lakes and ponds is 4.58 mg/m<sup>3</sup>.**

The current year data (the top graph) show that the chlorophyll-a concentration ***increased gradually*** from **June** through **August**.

The historical data (the bottom graph) show that the **2008** chlorophyll-a mean is ***slightly greater than*** the state median and is ***approximately equal to*** the similar lake median. For more information on the similar lake median, refer to Appendix F.

Overall, the statistical analysis of the historical data (the bottom graph) show that the mean annual chlorophyll-a concentration has **not significantly changed** (neither *increased* nor *decreased*) since monitoring began. Specifically, the chlorophyll-a concentration has remained **relatively stable, ranging between approximately 4.17 and 7.77 mg/m<sup>3</sup>**, which is **slightly greater than** the state median, since **1994**. Please refer to Appendix E for a detailed statistical analysis explanation and data print-out.

While algae are naturally present in all lakes, an excessive or increasing amount of any type is not welcomed. In freshwater lakes, phosphorus is the nutrient that algae typically depend upon for growth in New Hampshire lakes. Algal concentrations may increase as nonpoint sources of phosphorus from the watershed increase, or as in-lake phosphorus sources increase. Therefore, it is extremely important for volunteer monitors to continually educate all watershed residents about management practices that can be implemented to minimize phosphorus loading to surface waters.

### TRANSPARENCY

- **Figure 2 and Tables 3a and 3b:** Figure 2 in Appendix A shows the historical and current year data for transparency with and without the use of a viewscope. Table 3a in Appendix B lists the maximum, minimum and mean transparency data without the use of a viewscope and Table 3b lists the maximum, minimum and mean transparency data with the use of a viewscope for each year that the lake has been monitored through VLAP.

Volunteer monitors use the Secchi disk, a 20 cm disk with alternating black and white quadrants, to measure how far a person can see into the water. Transparency, a measure of water clarity, can be affected by the amount of algae and sediment in the water, as well as the natural color of the water. **The median summer transparency for New Hampshire's lakes and ponds is 3.2 meters.**

The current year data (the top graph) show that the non-viewscope in-lake transparency **decreased gradually** from **June** through **August**.

It is important to note that as the chlorophyll concentration **increased** at the deep spot as the summer progressed, the transparency **decreased**. We typically expect this **inverse** relationship in lakes. As the amount of algal cells in the water **increases**, the depth to which one can see into the water column typically **decreases** and vice versa.

The historical data (the bottom graph) show that the **2008** mean non-viewscope transparency is ***slightly less than*** the state median and is ***slightly greater than*** the similar lake median. Please refer to Appendix F for more information about the similar lake median.

The current year data (the top graph) show that the viewscope in-lake transparency ***decreased*** from **June** to **August**. The transparency measured with the viewscope was generally ***greater than*** the transparency measured without the viewscope this summer. As discussed previously, a comparison of the transparency readings taken with and without the use of a viewscope shows that the viewscope typically increases the depth to which the Secchi disk can be seen into the lake, particularly on sunny and windy days. We recommend that your group measure Secchi disk transparency with and without the viewscope on each sampling event.

It is important to note that viewscope transparency data are not compared to a New Hampshire median or similar lake median. This is because lake transparency with the use of a viewscope has not been historically measured by DES. At some point in the future, the New Hampshire and similar lake medians for viewscope transparency will be calculated and added to the appropriate graphs.

Overall, the statistical analysis of the historical data (the bottom graph) shows that the mean annual in-lake non-viewscope transparency has ***not significantly changed*** (either *increased* or *decreased*) since monitoring began. Specifically, the in-lake transparency has remained ***relatively stable, ranging between approximately 2.27 and 3.25 meters*** since **1995**. Please refer to Appendix E for the statistical analysis explanation and data print-out.

Typically, high intensity rainfall causes sediment-laden stormwater runoff to flow into surface waters, thus increasing turbidity and decreasing clarity. Efforts should continually be made to stabilize stream banks, lake shorelines, disturbed soils within the watershed, and especially dirt roads located immediately adjacent to the edge of tributaries and the lake. Guides to best management practices that can be implemented to reduce, and possibly even eliminate, nonpoint source pollutants, are available from DES upon request.

## TOTAL PHOSPHORUS

- **Figure 3 and Table 8:** The graphs in Figure 3 in Appendix A show the amount of epilimnetic (upper layer) phosphorus and hypolimnetic (lower layer) phosphorus; the inset graphs show current year data. Table 8 in Appendix B lists the annual maximum, minimum, and

median concentration for each deep spot layer and each tributary since the lake has been sampled through VLAP.

Phosphorus is typically the limiting nutrient for vascular plant and algae growth in New Hampshire's lakes and ponds. Excessive phosphorus in a lake can lead to increased plant and algal growth over time. **The median summer total phosphorus concentration in the epilimnion (upper layer) of New Hampshire's lakes and ponds is 12 ug/L. The median summer phosphorus concentration in the hypolimnion (lower layer) is 14 ug/L.**

The current year data for the epilimnion (the top inset graph) show that the phosphorus concentration ***decreased*** from **June** to **July**, and then ***increased*** from **July** to **August**.

The historical data show that the **2008** mean epilimnetic phosphorus concentration is ***slightly less than*** the state and similar lake medians. Refer to Appendix F for more information about the similar lake median.

The current year data for the hypolimnion (the bottom inset graph) show that the phosphorus concentration ***decreased*** from **June** to **July**, and then ***increased*** from **July** to **August**.

The hypolimnetic (lower layer) turbidity samples were ***elevated*** on the **July and August** sampling events (**5.09 and 7.13 NTUs**). Historically, the hypolimnion has experienced elevated turbidity levels. This suggests naturally elevated hypolimnetic turbidity and not a sampling error. However, please use caution when sampling the hypolimnion to not disturb bottom sediments with the Kemmerer bottle, and always check the hypolimnion sample before filling the sample bottle.

The historical data show that the **2008** mean hypolimnetic phosphorus concentration is ***approximately equal to*** the state median and is ***slightly less than*** the similar lake median. Please refer to Appendix F for more information about the similar lake median.

Overall, the statistical analysis of the historical data shows that the phosphorus concentration in the epilimnion (upper layer) and the hypolimnion (lower layer) has ***not significantly changed*** (either *increased* or *decreased*) since monitoring began. Specifically, the mean epilimnetic and hypolimnetic phosphorus concentrations have remained ***relatively stable, ranging between approximately 10 and 23 ug/L*** since **1994**. Please refer to Appendix E for the statistical analysis explanation and data print-out.

One of the most important approaches to reducing phosphorus loading to a waterbody is to continually educate watershed residents about the watershed sources of phosphorus and how excessive phosphorus loading can negatively affect the ecology and the recreational, economical, and ecological value of lakes and ponds.

#### TABLE INTERPRETATION

➤ **Table 2: Phytoplankton**

Table 2 in Appendix B lists the current and historical phytoplankton and/or cyanobacteria observed in the lake. Specifically, this table lists the three most dominant phytoplankton and/or cyanobacteria observed in the sample and their relative abundance in the sample.

The dominant phytoplankton and/or cyanobacteria observed in the **June** sample were ***Mallomonas (Golden-Brown)***, ***Cyclotella (Diatom)***, and ***Asterionella (Diatom)***.

Phytoplankton populations undergo a natural succession during the growing season. Please refer to the “Biological Monitoring Parameters” section of this report for a more detailed explanation regarding seasonal plankton succession. Diatoms and golden-brown algae populations are typical in New Hampshire’s less productive lakes and ponds.

➤ **Table 4: pH**

Table 4 in Appendix B presents the in-lake and tributary current year and historical pH data.

pH is measured on a logarithmic scale of 0 (acidic) to 14 (basic). pH is important to the survival and reproduction of fish and other aquatic life. A pH below 6.0 typically limits the growth and reproduction of fish. A pH between 6.0 and 7.0 is ideal for fish. The median pH value for the epilimnion (upper layer) in New Hampshire’s lakes and ponds is **6.6**, which indicates that the state surface waters are slightly acidic. For a more detailed explanation regarding pH, please refer to the “Chemical Monitoring Parameters” section of this report.

The mean pH at the deep spot this year ranged from **5.84** in the hypolimnion to **6.35** in the epilimnion, which means that the water is **slightly acidic**.

It is important to point out that the hypolimnetic (lower layer) pH was **lower (more acidic)** than in the epilimnion (upper layer). This

increase in acidity near the lake bottom is likely due to the decomposition of organic matter and the release of acidic by-products into the water column.

Due to the state's abundance of granite bedrock and acid deposition received from snowmelt, rainfall, and atmospheric particulates, there is little that can be feasibly done to effectively increase lake pH.

➤ **Table 5: Acid Neutralizing Capacity**

Table 5 in Appendix B presents the current year and historical epilimnetic ANC for each year the lake has been monitored through VLAP.

Buffering capacity (ANC) describes the ability of a solution to resist changes in pH by neutralizing the acidic input. The median ANC value for New Hampshire's lakes and ponds is **4.8 mg/L**, which indicates that many lakes and ponds in the state are at least "moderately vulnerable" to acidic inputs. For a more detailed explanation about ANC, please refer to the "Chemical Monitoring Parameters" section of this report.

The mean acid neutralizing capacity (ANC) of the epilimnion (upper layer) was **2.6 mg/L**, which is *slightly less than* the state median. In addition, this indicates that the lake is *moderately vulnerable* to acidic inputs.

➤ **Table 6: Conductivity**

Table 6 in Appendix B presents the current and historical conductivity values for tributaries and in-lake data. Conductivity is the numerical expression of the ability of water to carry an electric current, which is determined by the number of negatively charged ions from metals, salts, and minerals in the water column. The median conductivity value for New Hampshire's lakes and ponds is **38.4 uMhos/cm**. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

The mean annual epilimnetic conductivity at the deep spot this year was **69.06 uMhos/cm**, which is *greater than* the state median.

Overall, the **2008** conductivity results for the deep spot and tributaries were *slightly higher* than has been measured **during the past few years**. It is likely that the significant summer storm events likely increased the pollutants flushed from the watershed.

In addition, the in-lake conductivity is *slightly greater than* the

state median. Typically, increasing conductivity indicates the influence of pollutant sources associated with human activities. These sources include failed or marginally functioning septic systems, agricultural runoff, stormwater runoff, and road runoff which contains road salt during the spring snow-melt. New development in the watershed can alter runoff patterns and expose new soil and bedrock areas, which could also contribute to increasing conductivity. In addition, natural sources, such as iron and manganese deposits in bedrock, can influence conductivity.

We recommend that your monitoring group conduct stream surveys and rain event sampling along tributaries with **elevated** conductivity to help identify the sources.

*For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at <http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>, or contact the VLAP Coordinator.*

We also recommend that your monitoring group conduct a shoreline conductivity survey of the lake and tributaries with **elevated** conductivity to help identify the sources.

*To learn how to conduct a shoreline or tributary conductivity survey, please refer to the 2004 special topic article, which is posted on the VLAP website at <http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>, or contact the VLAP Coordinator.*

It is possible that de-icing materials applied to nearby roadways during the winter months may be influencing the conductivity in the lake. In New Hampshire, the most commonly used de-icing material is salt (sodium chloride).

Therefore, we recommend that the **epilimnion** (upper layer) be sampled for chloride next year. This additional sampling may help us identify what areas of the watershed are contributing to the increasing in-lake conductivity.

*Please note that the DES Limnology Center in Concord is able to conduct chloride analyses, free of charge. As a reminder, it is best to conduct chloride sampling in the spring as the snow is melting and during rain events.*  
**/publications.htm** or contact the VLAP Coordinator.

➤ **Table 7a and Table 7b: Total Kjeldahl Nitrogen and Nitrite+Nitrate Nitrogen**

Table 7a in Appendix B presents the current year and historical Total Kjeldahl Nitrogen and Table 7b presents the current year and historical nitrite and nitrate nitrogen. Nitrogen is another nutrient that is essential for the growth of plants and algae. Nitrogen is typically the limiting nutrient in estuaries and coastal ecosystems. However, in freshwater, nitrogen is not typically the limiting nutrient. Therefore, nitrogen is not typically sampled through VLAP. However, if phosphorus concentrations in freshwater are elevated, then nitrogen loading may stimulate additional plant and algal growth. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

During the most recent DES Lake Assessment Program survey, which was conducted during Summer **2006**, the ratio of the total nitrogen concentration to total phosphorus (TN:TP) concentration in the epilimnion sample was **31**, which is **greater than 15**, indicating that the lake is **phosphorus-limited**. This means that any additional **phosphorus** loading to the pond will stimulate additional plant and algal growth. Therefore, it is not critical to conduct nitrogen sampling.

*For more information regarding nitrogen sampling, contact the VLAP Coordinator.*

➤ **Table 8: Total Phosphorus**

Table 8 in Appendix B presents the current year and historical total phosphorus data for in-lake and tributary stations. Phosphorus is the nutrient that limits the algae’s ability to grow and reproduce. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

The phosphorus concentration in **Jowder Cove Inlet, Cochrane Inlet East, Cochrane Inlet West, Townline Inlet, Walsh Inlet and the Dam Outlet** were **relatively low** this year, which is good news. Typically, the majority of nutrient loading to a lake occurs in the spring during snow-melt and during intense rainstorms that cause soil erosion and surface runoff and within the watershed. It does not appear that the significant summer storm events negatively impacted these tributaries.

The total phosphorus concentration was **elevated (110, 110 and 87 ug/L)** in **Squantum Inlet** this year. This station has had a history of **elevated** and **fluctuating** phosphorus concentrations. We recommend that your monitoring group conduct a stream survey and

rain event sampling along this tributary so that we can determine what may be causing the elevated concentrations.

*For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at <http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>, or contact the VLAP Coordinator.*

The total phosphorus concentration in the **Taft Inlet** was **elevated (89 ug/L)** on the **July** sampling event. The turbidity of the sample was also **elevated (6.72 NTUs)**, which suggests that the stream bottom may have been disturbed while sampling or that erosion is occurring in the watershed. Field data indicate **1.0 inch** of rainfall prior to sampling which likely contributed to the elevated phosphorus and turbidity readings.

The total phosphorus concentrations in the **Woodbound Inlet** were **elevated (45 ug/L)** on the **June** sampling event. The turbidity of the sample was also **elevated (6.78 NTUs)**, which suggests that the stream bottom may have been disturbed while sampling or that erosion is occurring in the watershed. Field data indicate **0.5 inches** of rainfall prior to sampling which likely contributed to the elevated phosphorus and turbidity readings.

If you suspect that erosion is occurring in this area of the watershed, we recommend that your monitoring group conduct a stream survey and rain event sampling along this tributary. This additional sampling may allow us to determine what is causing the **elevated** levels of turbidity and phosphorus.

*For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at <http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>, or contact the VLAP Coordinator.*

- **Table 9 and Table 10: Dissolved Oxygen and Temperature Data**  
Table 9 in Appendix B shows the dissolved oxygen/temperature profile(s) collected during **2008**. Table 10 in Appendix B shows the historical and current year dissolved oxygen concentration in the hypolimnion (lower layer). The presence of sufficient amounts of dissolved oxygen in the water column is vital to fish and amphibians and bottom-dwelling organisms. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

The dissolved oxygen concentration was ***lower in the hypolimnion (lower layer) than in the epilimnion (upper layer)*** at the deep spot on the **June** sampling event. As stratified lakes age, and as the summer progresses, oxygen typically becomes ***depleted*** in the hypolimnion by the process of decomposition. Specifically, the reduction of hypolimnetic oxygen is primarily a result of biological organisms using oxygen to break down organic matter, both in the water column and particularly at the bottom of the lake where the water meets the sediment. When the hypolimnetic oxygen concentration is depleted to less than 1 mg/L, the phosphorus that is normally bound up in the sediment may be re-released into the water column, a process referred to as ***internal phosphorus loading***.

***Lower*** hypolimnetic oxygen levels are a sign of the ***lake's aging and declining*** health. This year the DES biologist collected the dissolved oxygen profile in **June**. We recommend that the annual biologist visit for the **2009** sampling year be scheduled during **July** so that we can determine if oxygen is depleted in the hypolimnion ***later*** in the sampling year.

➤ **Table 11: Turbidity**

Table 11 in Appendix B lists the current year and historical data for in-lake and tributary turbidity. Turbidity in the water is caused by suspended matter, such as clay, silt, and algae. Water clarity is strongly influenced by turbidity. Please refer to the "Other Monitoring Parameters" section of this report for a more detailed explanation.

As discussed previously, the hypolimnetic (lower layer) turbidity was ***slightly elevated (5.09 and 7.13 NTUs)*** on the **July** and **August** sampling events. In addition, the hypolimnetic turbidity has been elevated on many sampling events during previous sampling years. This suggests naturally elevated hypolimnetic turbidity and not a sampling error. However, please use caution when sampling the hypolimnion to not disturb bottom sediments with the Kemmerer bottle, and always check the hypolimnion sample before filling the sample bottle.

The turbidity in the **Squantum, Taft, Woodbound, and Walsh Inlet** samples was ***elevated (8.03, 6.72, 4.12, and 5.84 NTUs)*** on the **July** sampling event. In addition, many other tributaries experienced above average turbidity on the July sampling event. Field data indicate **1.0 inch** of rainfall prior to sampling. This indicates large volumes of watershed runoff during significant storm events.

If you suspect that erosion is occurring in this area of the watershed, we recommend that your monitoring group conduct a stream survey

and rain event sampling along this tributary. This additional sampling may allow us to determine what is causing the **elevated** levels of turbidity.

*For a detailed explanation on how to conduct rain event sampling and stream surveys, please refer to the 2002 VLAP Annual Report special topic article, which is posted on the VLAP website at <http://www.des.nh.gov/organization/divisions/water/wmb/vlap/categories/publications.htm>, or contact the VLAP Coordinator.*

➤ **Table 12: Bacteria (*E.coli*)**

Table 12 in Appendix B lists the current year and historical data for bacteria (*E.coli*) testing. *E. coli* is a normal bacterium found in the large intestine of humans and other warm-blooded animals. *E.coli* is used as an indicator organism because it is easily cultured and its presence in the water, in defined amounts, indicates that sewage **may** be present. If sewage is present in the water, potentially harmful disease-causing organisms **may** also be present.

The **Townline Inlet** *E. coli* concentration was **elevated** on the **June** sampling event. However, the concentration of **210** counts per 100 mL **was not greater than** the state standard of 406 counts per 100 mL for recreational waters that are not designated beaches.

The **Squantum Inlet and Squantum 3** *E. coli* concentrations were **elevated** on the **July** sampling event. However, the concentrations of **260 and 290** counts per 100 mL **were not greater than** the state standard of 406 counts per 100 mL for recreational waters that are not designated public beaches.

➤ **Table 13: Chloride**

Table 13 in Appendix B lists the current year and the historical data for chloride sampling. The chloride ion (Cl<sup>-</sup>) is found naturally in some surfacewaters and groundwaters and in high concentrations in seawater. Research has shown that elevated chloride levels can be toxic to freshwater aquatic life. In order to protect freshwater aquatic life in New Hampshire, the state has adopted **acute and chronic** chloride criteria of **860 and 230 mg/L** respectively. The chloride content in New Hampshire lakes is naturally low, generally less than 2 mg/L in surface waters located in remote areas away from habitation. The median epilimnetic chloride value for New Hampshire lakes and ponds is **5 mg/L**. Higher values are generally associated with salted highways and, to a lesser extent, with septic inputs. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

Chloride sampling was **not** conducted during **2008**.

➤ **Table 14: Current Year Biological and Chemical Raw Data**

Table 14 in Appendix B lists the most current sampling year results. Since the maximum, minimum, and annual mean values for each parameter are not shown on this table, this table displays the current year “raw,” meaning unprocessed, data. The results are sorted by station, depth, and then parameter.

➤ **Table 15: Station Table**

As of the spring of 2004, all historical and current year VLAP data are included in the DES Environmental Monitoring Database (EMD). To facilitate the transfer of VLAP data into the EMD, a new station identification system had to be developed. While volunteer monitoring groups can still use the sampling station names that they have used in the past and are most familiar with, an EMD station name also exists for each VLAP sampling location. Table 15 in Appendix B identifies what EMD station name corresponds to the station names you have used in the past and will continue to use in the future.

### **DATA QUALITY ASSURANCE AND CONTROL**

During the annual visit to your lake, the biologist conducted a sampling procedures assessment audit for your monitoring group. Specifically, the biologist observed the performance of your monitoring group and completed an assessment audit sheet to document the volunteer monitors’ ability to follow the proper field sampling procedures, as outlined in the VLAP Monitor’s Field Manual. This assessment is used to identify any aspects of sample collection in which volunteer monitors failed to follow proper procedures, and also provides an opportunity for the biologist to retrain the volunteer monitors as necessary. This will ultimately ensure samples that the volunteer monitors collect are truly representative of actual lake and tributary conditions.

Overall, your monitoring group did an **excellent** job collecting samples on the annual biologist visit this year! Specifically, the members of your monitoring group followed the proper field sampling procedures and there was no need for the biologist to provide additional training. Keep up the good work!

**Sample Receipt Checklist:**

Each time your monitoring group dropped off samples at the laboratory this summer, the laboratory staff completed a sample receipt checklist to assess and document if your group followed proper sampling techniques when collecting the samples. The purpose of the sample receipt checklist is to minimize, and hopefully eliminate, improper sampling techniques.

Overall, the sample receipt checklist showed that your monitoring group did an **excellent** job when collecting samples and submitting them to the laboratory this year! Specifically, the members of your monitoring group followed the proper field sampling procedures and there was no need for the laboratory staff to contact your group with questions, and no samples were rejected for analysis.

**USEFUL RESOURCES**

*Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials*, DES Booklet WD-03-42, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-03-42.pdf](http://www.des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-03-42.pdf).

*Erosion Control for Construction in the Protected Shoreland Buffer Zone*, DES fact sheet WD-SP-1, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-1.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-1.pdf).

*Impacts of Development Upon Stormwater Runoff*, DES fact sheet WD-WQE-7, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-7.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-7.pdf).

*Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes*, DES fact sheet WD-BB-9, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-9.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-9.pdf).

*Low Impact Development: Taking Steps to Protect New Hampshire's Surface Waters*, DES fact sheet WD-WMB-17, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-17.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-17.pdf).

*Road Salt and Water Quality*, DES fact sheet WD-WMB-4, (603) 271-2975 or

[www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-4.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-4.pdf).

*Shorelands Under the Jurisdiction of the Comprehensive Shoreland Protection Act*, DES fact sheet SP-4, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-4.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/sp/documents/sp-4.pdf).

*Soil Erosion and Sediment Control on Construction Sites*, DES fact sheet WQE-6, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-6.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/aot/documents/wqe-6.pdf).

*Watershed Districts and Ordinances*, DES fact sheet WD-WMB-16, (603) 271-2975 or [www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-16.pdf](http://www.des.nh.gov/organization/commissioner/pip/factsheets/wmb/documents/wmb-16.pdf).